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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,598	01/10/2002	Kei Yasuna	500.41053X00	5100
20457	7590	04/20/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			OLSON, JASON C	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 04/20/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,598

Applicant(s)

YASUNA ET AL.

Examiner

Jason C Olson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 5, and 7 recite the limitation "the magnetic head". There is insufficient antecedent basis for this limitation in the claim. The Examiner suggests that "the magnetic head" be replaced with "the magnetic disk". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Belser (U.S. 6,643,082).

Regarding claim 1, Belser teaches a hard disk drive assembly that includes a magnetic recording disk (see col. 8, line 8-10) for storing magnetically written data; a head to read data from and write data to the disk; the head is attached to an arm, which in combination with an actuator moves the head over the disk (see col. 5, line 1-22); to initialize a disk, the read and write heads are moved to an inner diameter (ID) of the disk surface against a crash stop (or stopper) and current is applied to the actuator arm motor to compress (or elastically deform) the crash stop and servo pattern timing marks are read to measure the time and distance reader to

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writer offset (or positional dependent characteristic) (see col. 8, line 32-62; The crash stop has to be formed by an elastic member for the actuator to be able to compress it.).

Regarding claims 2, while the actuator is depressed against the inner diameter crash stop, the head reads a servo pattern in order to measure the time and distance reader to writer offset (see col. 8, line 32-62).

Regarding claim 3, the head is moved along one direction while the disk is being initialized (see col. 8, line 37-62).

Regarding claims 5-6: Method claims (5-6) are drawn to the method of using the corresponding apparatus claimed in claims (1-3). Therefore method claims (5-6) correspond to apparatus claims (1-3) and are rejected for the same reasons of anticipation as used above.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 is allowed. The prior art fails to teach alone or in combination a servo signal recording method where an elastic deformation amount of the stopper is changed by varying force of driving the actuator under such a condition that the actuator is depressed against the stopper so as to change a position of the head in a stepwise mode and to record patterns having finite lengths which are not overlapped with each other at a plurality of radial positions.


Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baker et al. (U.S. 6,704,156) is cited for self-writing of servo patterns in a disk drive. Cunningham et al. (U.S. 6,005,742) is cited for controlling a multi-stage actuator in a disk drive. Brown et al. (U.S. 6,040,955) is cited for self-servo writing. Smith et al. (U.S. 5,838,514) is cited for calibrating a thermal response of a magnetoresistive transducer. Yarmchuk (U.S. 6,344,942) is cited for absolute track spacing determination for self-servo writing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C Olson whose telephone number is 703.305.8325. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on (703)308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCO 
March 8th, 2004


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER